UCSF newsbreak

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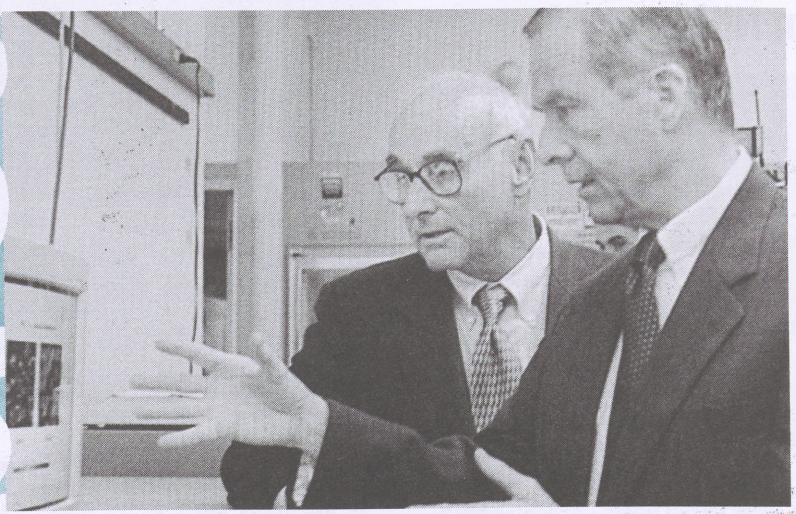
NEWS FOR THE UCSF CAMPUS COMMUNITY VOL. 13, NO. 19 SEPTEMBER 18, 1998



Gov. Pete Wilson, right, visits with Ivan Diamond at SFGH

Trailblazers get Governor's support

Governor Pete Wilson toured the labs of the Ernest Gallo Research Center and Clinic at SFGH on Sept. 9 to give a $16.8 million check as the first yearly installment of a five-year, $143 million commitment to alcoholism research.

The funding will help Gallo researchers identify the biological causes of alcoholism, says Ivan Diamond, the director.

Wilson met with Diamond, Vice Chancellor for Research Zach Hall, and Stephen Hauser, chair of the department of neurology.

He also received a quick lesson in the biological effects of ethanol from Adrienne Gordon, a principal investigator at the Gallo Center.

Wilson praised UCSF for continually being at the forefront of medical discoveries and described the research being done at the Gallo Center as "revolutionary" and "trailblazing." "Their research holds the promise of discovering the biological basis for alcoholism," Wilson said. "I leave to your imagination the changes it would make, the money it would save, the lives it would liberate."

Students hunt for housing in red-hot real estate market

BY LISA CISNEROS

The start of the school year often times means a major change of life for new students who relocate to one of the most desirable destinations: San Francisco.

And while admission to UCSF is a stellar accomplishment, finding a nice place to live in the popular city is a feat unto itself – especially in today's tight housing market.

For as long as Barbara Jones has headed the UCSF Campus Housing Office, the high demand and the low supply of affordable dwellings this year has become the most lopsided in recent memory.

"Let's put it this way: Our website for housing information gets 25,000 hits per day," says Jones. "That's an all-time high for us. Last year, it started to escalate to about 17,000 hits per day."

Scores of students, faculty and staff have turned to the Campus Housing Office's website to browse the interactive online listing of off-campus housing options. While users have the ability to search the Campus Housing's database to find accommodations that meet their personal price range and living arrangement, many must seek additional resources to put a roof over their heads. Most must set aside at least a month in the hunt for highly coveted rental units in a city where the vacancy turnover rate is less than 1 percent a month, experts say.

UCSF's Guide to Off-Campus Living advises to "use guerrilla tactics" in the search – jumping on new electronic listings and chatting up locals and apartment managers for the inside scoop on what's available or what may be coming available.

When the San Francisco Consortium on Higher Education, of which UCSF is a member, announced that a limited number of houses were

(SEE HOUSING ON PAGE 7)

Research team solves part of HIV mystery

BY CORINNA KAARLELA

Scientists in Texas, California and New York believe they have solved part of the mystery of how HIV can kill cells it doesn't infect—and thereby prompt the downward spiral that results in AIDS.

The results may help researchers and physicians understand what makes HIV-infected people take a sudden turn for the worse after years of harboring the AIDS virus but showing few symptoms. They may also point to new ways of stopping this sudden decline, which ultimately claims the lives of patients with AIDS.

The research was conducted by Eric Verdin, an investigator at the Gladstone Institute of Virology and Immunology and professor of medicine at UCSF, and Georges Herbein, assistant professor of internal medicine and included researchers at the Picower Institute for Medical Research and North Shore University Hospital in New York.

HIV is well known for causing a decline in immune cells called CD4 or helper T-cells, whose numbers start to drop soon after HIV infection. Doctors use this familiar drop in CD4 cell counts as a so-called surrogate marker to monitor their patients' progress and response to therapy. High levels of helper T-cells are a good sign; low levels are a sign of advancing disease.

But HIV-positive people also lose another set of immune cells, called CD8 T-cells. CD8 cells, also known as killer T-cells, are the body's primary virus-fighting weapon. After HIV infection, their numbers remain generally high, sometimes for years, until a point when they inexplicably begin to die off rapidly. Until then, the killer T cells keep the AIDS virus at bay. As those cells disappear, the virus takes over.

Scientists never knew what triggered this sudden turn of events, but the new research suggests that certain strains of the AIDS virus that appear in some people during later stages of HIV disease may prompt a mass suicide of CD8 cells. What's more, the new study suggests that HIV uses one of the immune system's own key players as an accomplice to promote this self-inflicted death.

The result is a sinister snowball effect. "Once patients lose their CD8 T-cells, growth of the virus in CD4 helper cells is probably boosted, and more cells will be killed," says Herbein, the study's lead author. "So you will have an accelerated decline in overall immune function, until the immune system is exhausted."

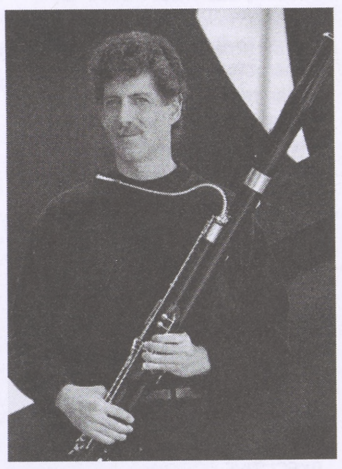
"Very little is known about how HIV affects cells other than CD4 helper cells. Our observations describe a new pathway through which HIV can disturb the function of uninfected cells," says Verdin, senior author of the study and head of the Laboratory of Molecular Virology at the Gladstone Institute.

This research links several previously unconnected observations. For example, scientists knew that CD8 cells of HIV-infected patients have a higher than normal turnover rate, meaning that they die more quickly than normal. The good news is that the lost cells are replaced by the body during the early stages of disease, so that overall CD8 numbers generally remain high. CD8 cells lack a key molecule, known as the CD4 receptor that is present on T helper cells and allows HIV to gain entry to a cell. Since CD8 cells aren't infected by the AIDS virus, scientists weren't sure why they died during HIV disease.

Scientists also knew that patients who carry a certain type of virus known as a syncytium inducing, or SI, strain usually succumb more quickly to AIDS. Since SI strains appear late during the course of HIV infection, scientists never knew whether they were a cause or an effect of those patients' rapid decline.

The new research suggests they are a cause. Experiments conducted both in plastic lab dishes and in patients' blood suggest that SI strains increase CD8 cell death to a level so high the body can no longer replace these crucial virus-fighting cells. SI strains do this by binding to a molecule known as CXCR4, which is present on both CD8 cells and on another crucial immune cell, known as a

(SEE HIV ON PAGE 6)



Stephen Paulson

A bit of the bassoon

UCSF will be serving a different lunchtime treat this academic year— the Chancellor's Concert Series.

The inaugural season of the free classical music series is founded and funded by a generous grant from former Chancellor Haile Debas, dean of the School of Medi-cine, to enrich the quality of life at UCSF.

Concerts will begin Thursday, Oct. 15 with San Francisco Symphony artists Stephen Paulson (the new director of the UCSF Orchestra) on the bassoon, Eugene Izotov on the oboe and Robin Sutherland on the piano playing French music of the 16th and 20th centuries. Concerts will be held in Cole Hall from 12:15 to 12:45 p.m.

"These professional musicians are the best in San Francisco and you don't have to pay $25 to hear them," says Pearl Toy, a professor who organized the program. "We're all very excited."

For more information, see Daybreak at www.ucsf.edu/daybreak.

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About Newsbreak's new look

With this issue, Newsbreak debuts a completely new design—the first such total overhaul in its 13-year history. The airier, more contemporary look, created by senior designer Martha Fitzgerald and design and production artist Victoria Maier, exemplifies UCSF's new visual and graphic identity system being developed by University Publications, a division of UCSF Public Affairs. For more information about these graphic and logo standards, contact Carol Kummer, University Publications' design director, at 476-9112.

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EXECUTIVE EDITOR:
Jeff Miller

EDITOR:
Lisa Cisneros

CONTRIBUTORS: Andy Evangelista, Paula Murphy, Jeffrey Norris, Nancy Heller and the UCSF News Services staff

PHOTOGRAPHY: Robert Foothorap, pages 1, 2; Ray "Scotty" Morris, page 2; Lisa Cisneros, pages 3 and 7; Allen Balderson, page 7.

COPY EDITOR:
Daniel Rowe
SENIOR DESIGNER:
Martha Fitzgerald

DESIGN & PRODUCTION:
Victoria Maier

Carol Fox, Assistant Vice Chancellor, Public Affairs

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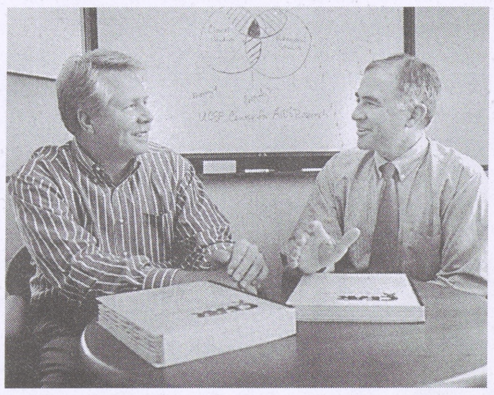
UCSF AIDS research center receives major new grant from NIH



Warner Greene, left, chats with Paul Volberding

The UCSF Center for AIDS Research (CFAR) headquartered at San Francisco General Hospital, is one of 12 centers nationwide selected for a major new grant from the National Institutes of Health (NIH). CFAR, part of the AIDS research Institute, will receive $5.76 million over the next four years.

The award will support ongoing UCSF work in the basic, clinical, and behavioral science areas of HIV/AIDS, with an emphasis on developing new treatment approaches, understanding the biology of HIV transmission to prevent infection, and improving the effectiveness of therapies.

Co-directors of the UCSF CFAR are Paul A. Volberding, director of the UCSF AIDS Program at SFGH, and Warner C. Greene, director of the UCSF-affiliated Gladstone Institute of Virology and Immunology.

"UCSF continues to be a leader in HIV research, and we are particularly pleased that this grant will support work that crosses conventional scientific boundaries," Volberding says. "In this way, we can rapidly apply insights from basic laboratory research to address our patients' problems. The CFAR grant allows us to become an even more effective research community."

First funded through NIH in 1988, the CFAR program is designed to provide a national pool of shared resources that is made available to AIDS researchers at the local level. Through this network several major advances in AIDS research have evolved, including identifying new co-receptors for HIV, the role of cytotoxic T-lymphocytes in early infection and in controlling virus replication, and using anti-retroviral drugs as probes to understand the dynamics of HIV replication.

The overall mission of the CFAR program is to support AIDS research by promoting interdisciplinary and international interactions, technology transfer through academic-industry collaborations, research dissemination activities, and community outreach.

NIH Institutes funding the awards are the National Institute of Allergy and Infectious Diseases, the National Cancer Institute, the National Heart, Lung and Blood Institute, the National Institute of Child Health and Human Development, the National Institute on Drug Abuse, and the National Institute of Mental Health.

A warm reception for Bishop

UCSF Chancellor Mike Bishop and his wife, Katheryn, were the honored guests at a Sept. 1 reception at the UCSF Faculty/Alumni House hosted by the UCSF Hospitals Auxiliary and UCSF Stanford Health Care.

A Nobel laureate, Bishop assumed his new position in July after serving on the UCSF faculty for 30 years as a distinguished researcher, scholar and beloved teacher.

The UCSF Medical Center united its patient care services with Stanford last November to form UCSF Stanford Health Care.

Pictured above are from left, Eugene Bauer, dean of the Stanford University Medical School, Peter Van Etten, chief executive officer of UCSF Stanford Health Care, Bishop and Marianne Goldman, event chair and member of the board of directors of the Hospitals Auxiliary.

PRIVATE SUPPORT

UCSF is pleased to acknowledge the following gifts/pledges of $25,000 or more from individuals, corporations and foundations received August 23-September 5, 1998.

$500,000 - $999,999

Howard Hughes Medical Institute

$250,000 - $499,999

Montgomery Street Foundation

$100,000 - $249,999

Rita Medical Systems, Inc.

The Tides Foundation

$25,000 - $99,999

Arthritis Foundation

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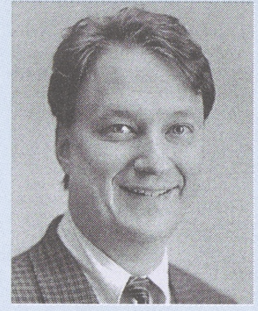
appointments



Bangsberg

Bangsberg to head EPI Center

David Bangsberg has been appointed director of the Epidemiology Prevention and Interventions (EPI) Center at San Francisco General Hospital.

Bangsberg will oversee all clinical and research programs of the EPI Center, which focuses on surveillance and prevention of infectious diseases among patients and their health care providers.

Bangsberg also will serve as co-chair of the Hospital Infection Committee and as epidemiologist for the Community Health Network (CHN), an integrated health care delivery system that serves San Francisco and includes SFGH.

As EPI Center director, Bangsberg succeeds Julie Gerberding, who now heads the Hospital Infections Program of the National Centers for Infectious Diseases, Centers for Disease Control and Prevention in Atlanta. She established the EPI Center in 1987.

Bangsberg joined the UCSF faculty last year as assistant professor in the divisions of infectious diseases and AIDS and oncology at SFGH.

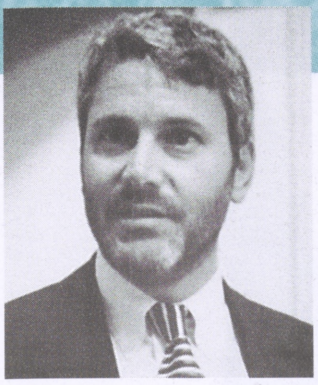
One of his primary research interests, in collaboration with UCSF epidemiologist Andrew Moss, PhD, is HIV infection in the urban indigent. A central project is the REACH study—for Research in Access to Care in the Homeless—which was started in response to concerns that the urban poor may develop resistant strains of HIV as a result of not adhering to therapy. Early work from this project has led to national recommendations for deciding how and when to prescribe antiviral therapy to the homeless population who are HIV-infected.

Bangsberg recently received funding to study the attitude of health care providers regarding the prescription of HIV antiviral therapy in the urban indigent.

His other research areas include tuberculosis in low-income hotel occupants and the molecular epidemiology of antimicrobial resistance.

Bangsberg's medical education includes an MD degree from Johns Hopkins University and an MPH from UC Berkeley. He completed residency training in internal medicine at Columbia-Presbyterian Hospital in New York, where he was chief resident. He also served as a fellow in infectious disease at UCSF.

A native of Portland, Ore., he received his bachelor's of science degree in biology from the University of Rochester and a master's in the history and philosophy of science from Kings College, University of London.



Howard Kippen

Gulf War leaves vets with baffling set of symptoms

BY LISA CISNEROS

A smorgasbord of harmful chemicals has likely left about 90,000 US soldiers with a troublesome set of symptoms as a souvenir from their conflict in the Persian Gulf War.

The symptoms of fatigue, skin rash, headache, muscle and joint pain, loss of memory, shortness of breath, trouble sleeping, diarrhea and chest pain, have been reported by 15 percent of the 700,000 soldiers deployed in Operation Desert Storm.

Most veterans reported this common constellation of unexplained and not easily treated symptoms, defined as the Gulf War Syndrome, six months after returning home, said Howard Kippen, guest speaker at the sixth annual Alice Hamilton Lecture sponsored by the department of medicine on Sept. 10.

"The complaints of Gulf War veterans can largely be viewed as unexplained or having poor physical or biological basis," said Kippen, a 1979 graduate of the UCSF School of Medicine.

A leading expert in occupational medicine and professor at the Robert Wood Johnson Medical School, Kippen said, the extent of the exposure to hazardous materials in which Gulf War soldiers came into contact during duty is unknown.

"And we as physicians don't have a lot to offer and are not very comfortable with trying to treat things that don't have an organic or pathologic basis," said Kippen, who has served on several national panels convened to study Gulf War Syndrome.

The conflict began on Aug. 2, 1990, when the Iraqis invaded Kuwait. The US responded almost immediately by sending in its forces, 7 percent of whom were women. Half of US troops came from the Army, 23 percent Navy, 15 percent Marines and 12 percent Air Force, Kippen said.

"This has been referred to as the perfect war. There was five weeks of bombing and a hundred hours of ground assault rapidly moving."

Four days later, the human toll in terms of American casualties was remarkably low – only 147 killed in combat – 467 injured and 145 killed in accidents, homicides, disease and other non-combat related incidents, Kippen said.

What's not frequently reported, according to Kippen is that, to date, more than 100,000 soldiers of the 700,000 who were deployed, have signed up to be examined on a registry either through the Department of Veterans Affairs or through the Department of Defense. About 90,000 have reported the aforementioned symptoms.

The exposures that experts have wondered about and have been alleged to cause these symptoms include depleted uranium, nerve gas, mustard gas, oil fires and insect repellent, Kippen said.

Another agent, pyridostigmine bromide, was given to US soldiers in the dosage of 90 milligrams a day to prevent nerve poisoning. "It's interesting because it's one of the few things that we know the soldiers, lots of them –perhaps 100,000 – were exposed to in pharmacologically active, relevant amounts. Unfortunately, we have no idea who was exposed. Every soldier within a given area was issued it. It was to be taken at the discretion of the unit commander who was getting orders from above. Nobody has any idea who took how much, who took a lot, who took a little, " Kippen said.

And while the symptoms still remain a mystery, physicians such as Stephen L. Davis, chief of occupational medicine at the Veterans Affairs in Martinez, believes that veterans have valid health concerns. He has seen 250 veterans with a number of these symptoms. "I personally believe that these people have something Gulf-War related going on with them," he said.

While traditional treatment options are limited, Davis says he plans to try acupuncture to relieve symptoms beginning this fall.

> ‘ And we as physicians don't have a lot to offer and are not very comfortable with trying to treat things that don't have an organic or pathological basis. ’

research roundup

Low estrogen may prevent bone fractures

UCSF researchers found that a small dose of estrogen will prevent bone loss and hip and spine fractures without increasing a postmenopausal woman's risk of uterine cancer, bleeding and possibly breast cancer, researchers say.

Typically, most doctors recommend that postmenopausal women who choose to take estrogen replacement therapies take a dose that produces 40-60 picograms (pg) per milliliter (ml) estrogen levels. However, Steven Cummings, UCSF professor of medicine and epidemiology, says "Based on our findings, it seems important for women to maintain at least a little estrogen in their systems after menopause . Our study suggests that for women whose estrogen level is less than five pg per milliliter, a much lower than standard dose of estrogen may be effective in preventing bone fractures."

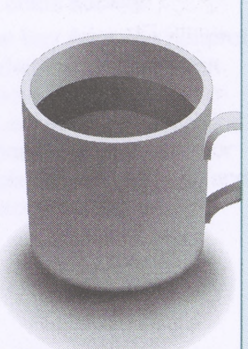
Drug reduces hip fractures by 56 percent

Results from the landmark Fracture Intervention Trial, a collaborative effort of UCSF and 11 other academic medical centers, finds that the osteoporosis drug, alendronate, can reduce the risk of hip fractures by 56 percent among women who have never suffered a spinal fracture.

"These results are dramatic," says Dennis Black, UCSF professor of medicine and epidemiology. "No other therapy has been shown to work in such a wide spectrum of women with osteoporosis to reduce the most devastating of fractures—those that occur at the hip."

The new findings from the 6,000-patient trial show that the osteoporosis drug, available as FOSAMAX, also reduced the likelihood of painful spine fractures by 49 percent in women who have never had a spine fracture. Among women in the study who did not have osteoporosis, fractures were less common. However, this group did achieve increases in bone mineral density.

In a previous arm of FIT, which only included osteoporatic women who had already suffered a spinal fracture, alendronate reduced the risk of hip fractures by 51 percent and the risk of spine fractures by 47 percent.



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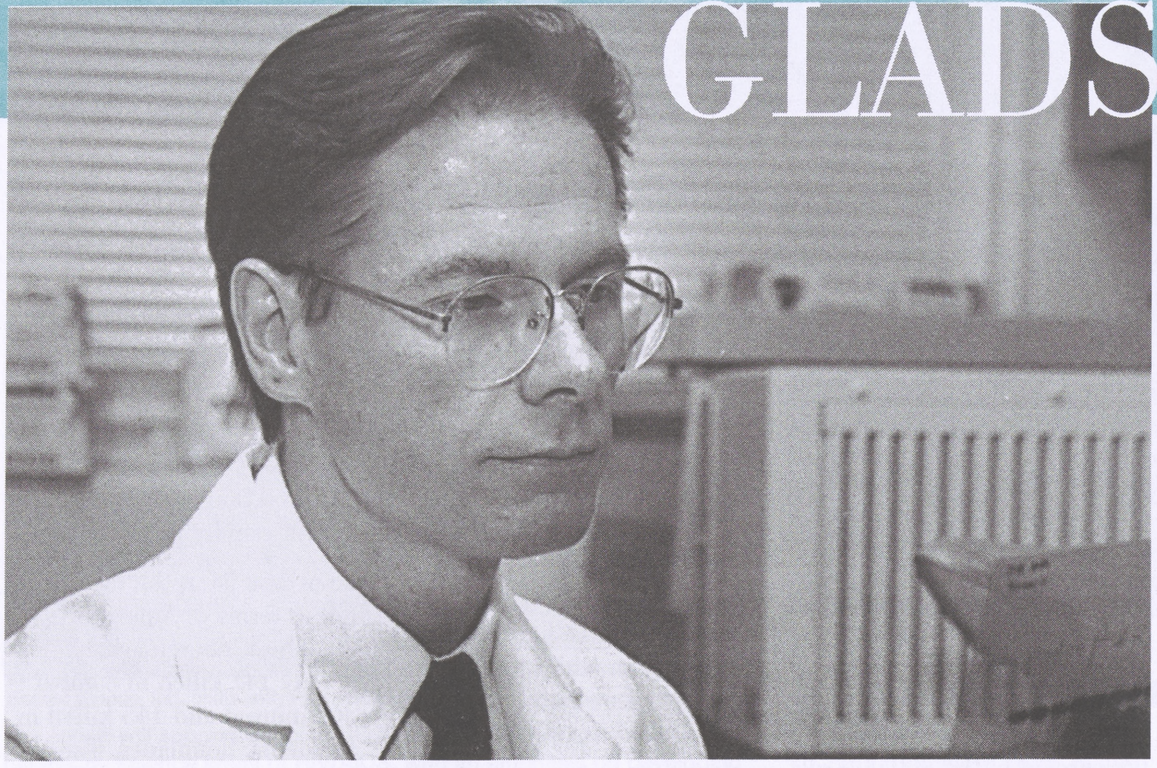
GLADSTONE



Lennart Mucke directs the new Gladstone Institute of Neurological Disease on the SFGH campus

New venture to focus on battling debilitating brain diseases

The J. David Gladstone Institutes, in partnership with UCSF, inaugurated a major new research venture last Friday that will focus solely on advancing scientific knowledge about brain diseases.

BY CORINNA KAARLELA

Researchers at the Gladstone Institute of Neurological Disease will strive for a greater understanding of the biology of neurological disease with the goal of speeding development of new treatment for some of the most prevalent and incapacitating disorders–such as Alzheimer's disease, HIV-associated dementia and stroke.

Alzheimer's disease affects some four million Americans and is the fourth leading cause of death among adults in the US. Dementia also afflicts a significant number of AIDS patients, and the National Institute on Aging estimates that Americans suffer nearly 700,000 strokes each year.

The new institute, to be located at San Francisco General Hospital, brings together six principal investigators and thirteen additional scientists from multiple disciplines who will pool their expertise.

"We are in an excellent position to increase our understanding of the processes that result in neurological disease and to hasten the development of therapies for these devastating conditions," says Lennart Mucke, UCSF associate professor of neurology and the institute's director. "I am very excited about the future."

The new institute will build on a 1992 discovery by Gladstone researchers that apolipoprotein E (apoE), a protein involved in cholesterol metabolism, also has profound effects on the growth of nerve cells. Since then, other investigators have found that the inheritance of certain variations of the apoE gene is a significant risk factor for Alzheimer's disease.

"The establishment of this institute reflects the astonishing scientific momentum that has already been achieved under Dr. Mahley's and Dr. Mucke's leadership," says Haile T. Debas, dean of the UCSF School of Medicine and vice chancellor for medical affairs. "UCSF is pleased to have this opportunity to expand an already fruitful collaboration with the Gladstone Institute."

The seed for the new institute was planted in 1996, when Mucke came to UCSF from the Scripps Research Institute in La Jolla to direct the newly created Gladstone Molecular Neurobiology Program.

The program, a collaborative effort with the UCSF department of neurology, made such rapid progress in studies of Alzheimer's disease and HIV-associated dementia that the decision was made to significantly expand the effort and create an entirely new enterprise, according to Robert W. Mahley, UCSF professor of medicine and pathology and president of the Gladstone Institutes.

Supported by a combination of outside resources and Gladstone funds, the new institute will join the Gladstone Institute of Cardiovascular Disease and the Gladstone Institute of Virology and Immunology, also located at SFGH. "This marks a significant step in the evolution of the Gladstone Institutes," says Mahley.

The Gladstone researchers have worked closely with their neuroscience colleagues on the UCSF Parnassus campus and already have formed a Bay Area Alzheimer's Disease Study Group that brings researchers from leading academic institutions to monthly meetings at UCSF and SFGH.

Under the University's current plans, the new institute will be relocated to UCSF's future Mission Bay campus. This move would allow close collaborations between the Gladstone researchers and other neuroscientists at UCSF.

"Our program will contribute to the critical mass of scientists focused on brain research and should form a vital link between basic and clinical neuroscience on the new campus," Mahley says.

The investigators joining forces in the new institute have already made a number of important discoveries:

- **They have found, together with colleagues from other institutions, that so-called "amyloid proteins," which accumulate in brains of Alzheimer's patients in the form of spider web-like deposits, can damage connections between nerve cells that are important for normal brain function.**
- **They have observed that molecules involved in brain inflammation after strokes and head injury can increase the accumulation of amyloid proteins in the brain.**
- **Most recently, a team of Gladstone neuroscientists have demonstrated that apoE4, a protein that strongly increases the risk of developing Alzheimer's disease in humans, impairs memory and learning in mice. (See adjacent story for study results.) The animal models used in this research and others developed by Gladstone investigators can be used to test the effectiveness and safety of new treatments before they are used in human patients.**
- **Gladstone neuroscientists have shown that specific HIV proteins can disrupt the normal function of nerve cells and that, at least in animal models, these effects can be blocked with medications that make nerve cells less excitable.**
- **The researchers showed that the human CD4 receptor, the entryway for HIV into immune cells, also may play a role in the degeneration of brain cells in AIDS patients.**

The new institute was inaugurated with a one-day scientific symposium featuring distinguished neuroscientists from UCSF and around the country. Among the speakers were Zach Hall, UCSF vice chancellor for research and former director of the National Institute of Neurological Disorders and Stroke of the NIH, and Nobel laureate Stanley Prusiner, UCSF professor of neurology, who won the coveted prize in 1997 for his work on prions, particles responsible for some forms of dementia.

"The diseases we study rob people of their memories and of the ability to share thoughts with loved ones. These conditions are so frequent that, sooner or later, almost everybody is touched by one of them, either directly or indirectly through an afflicted relative or friend," Mucke says. "The new Gladstone Institute of Neurological Disease will greatly strengthen UCSF's fight against these illnesses."

The J. David Gladstone Institutes are named for a prominent real estate developer who died in 1971. His will created a testamentary trust that reflects his long-standing personal interest in medical education.

INSTITUTE of neurological disease

Mice study may lead to new Alzheimer's treatment

Laboratory mice genetically engineered to have a human protein associated with increased risk of Alzheimer's disease in their brain, show learning and memory problems strikingly similar to those seen in humans with the disorder, researchers say.

People who inherit the gene for apolipoprotein E4 (apoE4) are known to be at much greater risk of Alzheimer's than people who inherit the gene for the more common form of this protein, called apoE3. To characterize the effects of these proteins on cognitive functions, researchers at the J. David Gladstone Institutes developed entirely new strains of mice that express human apoE3 or apoE4 in the brain instead of mouse apoE. The researchers then observed the behavior of these mice in a variety of controlled laboratory situations that require specific cognitive skills.

The apoE4 mice performed poorly in tests requiring spatial learning and memory skills and were less likely to explore their environment than the apoE3 mice. The effects were most noticeable in mice that were older and female.

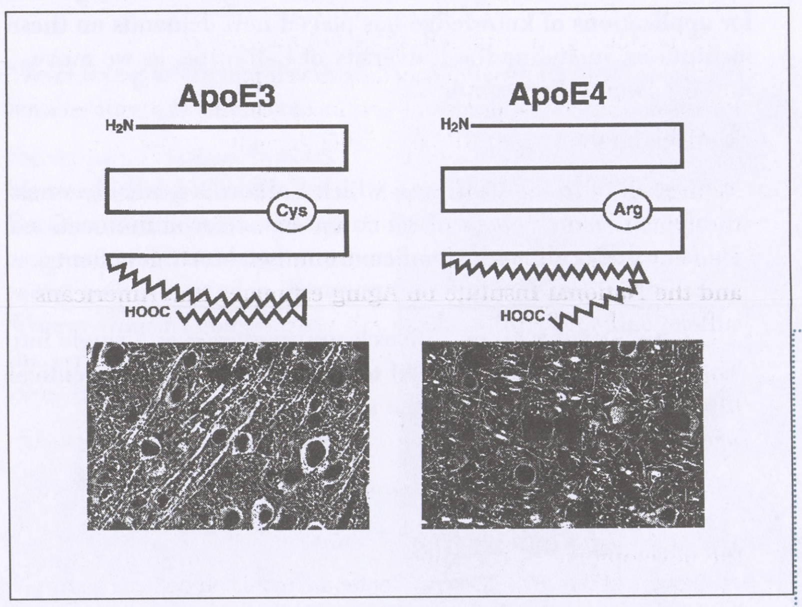
"We are very excited about these results because they mimic in several respects what is seen in humans with Alzheimer's disease," says Lennart Mucke, director of the Gladstone Institute of Neurological Disease, UCSF associate professor of neurology.

"Alzheimer's typically comes on with advancing age, and women who have apoE4 appear to be at particularly high risk for the disease," adds Jacob Raber, a staff research scientist at the Gladstone.

The newly engineered apoE4 mice could serve as a valuable tool for testing potential therapies for this devastating disease. "This is the first model in which we were able to simulate the detrimental effects of human apoE4 on brain function," Mucke says "That should put us in a good position to test out treatments to combat these detrimental effects."

The work was conducted by investigators at the Gladstone Institute of Neurological Disease, a major new research enterprise based at the SFGH campus of UCSF. The results are published in the Sept. 1 issue of Proceedings of the National Academy of Sciences U.S.A.

The researchers already have begun to manipulate the levels of apoE4 in the brains of these mice to see what impact these changes might have on their behavior. It may be possible to design drugs that inhibit apoE4 or simulate apoE3 to counteract the neurological effects of Alzheimer's, Mucke says. "The real test of this model will come when we can test treatment strategies and see if they will work in humans," he said.



What we learn from mice

Researchers at the Gladstone Institute of Neurological Disease and UCSF have conducted a study in mice that offers insight into why people who inherit two copies of the apolipoprotein E4(apoE4) gene have a much greater risk of developing Alzheimer's disease than people with two copies of the most common variation of the gene, apoE3. The genetically engineered mice could be ideal, they say, for testing drugs aimed at preventing the detrimental effects of apoE4.

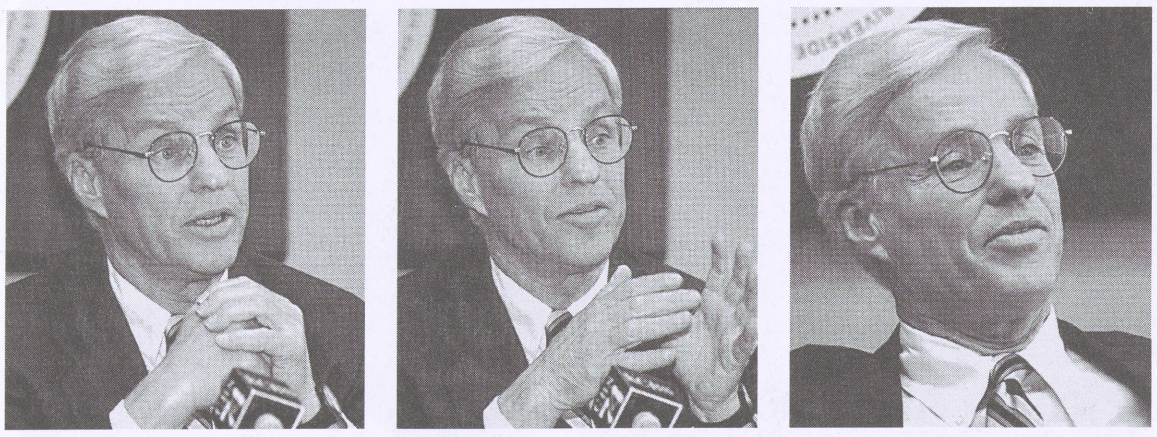
In their study, the researchers generated strains of mice that expressed either human apoE4 protein or human apoE3 protein in their brains. The mice were either allowed to age normally or were treated with excitatory amino acids, which are presumed to contribute to a number of neurodegenerative conditions.

The researchers then analyzed the density and integrity of the nerve cell processes in their brains by staining sections with fluorescently labeled antibodies and analyzing the sections with high-resolution microscopy.

Significantly, apoE3 mice maintained normal nerve cell processes as shown in the top left panel. In contrast, the nerve cells in apoE4 mice withered away, as shown in the top right panel. The investigators speculate that the failure of apoE4 to prevent neurodegeneration in aging mice could explain the increased Alzheimer's disease risk observed in humans carrying the apoE4 gene. Notably, the proteins differ by only one amino acid, apoE3 containing a Cys (cystein) amino acid, and apoE4 containing an Arg (argenine) amino acid.

Alzheimer's facts

- Nationally, about 4 million Americans have Alzheimer's disease. (AD)
- One in 10 persons over the age 65 and nearly half of those over 85 have AD.
- A person with AD will live an average of eight years and as many as 20 years or more from the onset of symptoms.
- Half of all nursing home residents suffer from AD or a related disorder.
- The US spends at least $1 billion a year on AD. Neither Medicare nor most private health insurance covers the long term care most patients need.
- The average lifetime cost per patient is $174,000.
- The federal government estimates spending about $349 million on AD research in 1998. This represents $1 for every $287 the disease now costs society.
- In the Bay Area, the nonprofit Alzheimer's Association provides information, support, education and training, advocacy and research for people afflicted with AD and related disorders.



UC President Atkinson outlines future of University

In a statement regarding the future of the UC system and the continuing influence of research universities on American life, University of California president Richard Atkinson outlined the organizational changes, goals, and initiatives UC must pursue to meet future demands and to "sustain itself as a great university."

University-based research has a great impact on the economy and has led to many of California's world-class industries, such as biotechnology and computers, Atkinson wrote in the statement, which is available online www.ucop.edu/ucophome/pres/comments/future of.htm. "The tradition of research universities has been to value knowledge for its own sake," he wrote. "However, society's increasing need for applications of knowledge has placed new demands on these institutions, including the University of California, as we move into the twenty-first century."

Other highlights:

- Almost all of the industries in which California leads the world – biotechnology, software and computers, telecommunications, multimedia, semiconductors, environmental technologies – were born of university-based research.
- UC is a collection of ten research universities – as a single but not a monolithic institution of ten campuses – not all identical and not all moving toward the same template. Just as Princeton and the University of Michigan are both research universities but clearly different in size, in the array of academic disciplines, and in the make-up of their professional schools, so the University of California's campuses can be seen as variations on a single theme, each pursuing excellence in different ways.
- The University must be prepared to educate its share of the estimated 450,000 new students seeking a college or university education between 1993 and 2005 – an increase in enrollment demand of 24 percent for California higher education generally. It is estimated that UC will grow by about 45,000 students between now and the year 2010, with almost half of that expansion occurring before 2005. UC's planned tenth campus in Merced, which will open its doors in 2005, will help accommodate some of this demand.
- UC plays a critical role in research as it affects the economic vitality of California. UC will not become a "job shop" for industry, and will not compromise the quality, independence, or breadth of its research enterprise.
- Every university worthy of the name embraces a diversity of thought and opinion. As a public university in one of the most diverse states in the nation, the University of California has the further obligation of reflecting the mix of the state's population in the mix of its students, faculty, and staff. Both forms of diversity – a wide range of intellectual perspectives and a broad representation of California's population – are indispensable to our mission as a public university.

medical call board

Advanced lung cancer trial

Researchers at the UCSF Cancer Center are recruiting patients with advanced lung cancer for a clinical trial of a novel drug that they hope will inhibit the growth and spread of cancer.

The drug is one of the first agents in a new class of therapies that have been shown to inhibit the actions of a natural body chemical, called Matrix Metalloproteases (MMPs), that have been shown to play a significant role in tumor development.

To qualify for the trial at UCSF/Mount Zion, part of UCSF Stanford Health Care, patients must have advanced non-small cell lung cancer, a recurrence of the disease following surgery or radiation therapy, and have had no previous chemotherapy treatments.

Those who are interested in participating in the trial should contact the UCSF Cancer Center trial coordinator Greg David at 885-7283.

Crohn's disease

Pediatric gastroenterologists at UCSF have begun enrolling children aged 5 to 18 in a clinical trial of a new nutritional therapy for Crohn's disease.

The purpose of the study is to investigate the potential role of a highly specialized nutritional product to achieve remission of Crohn's disease, a chronic inflammation of the small intestine that may involve many or all parts of the gastrointestinal tract. The treatment uses a new liquid formula containing complete nutrition for children with this disease.

For more information about the clinical trial at UCSF, please call 476-5892.

Pharmaceuticals

The School of Pharmacy's department of biopharmaceutical sciences is recruiting male and female volunteers, between the ages of 20 and 40, for two clinical studies.

The "Lasix-Indocin Study" involves four 13-hour hospital visits and pays $500. Persons interested in this study should call Shawn Flanagan at 476-5890, or send an email to shawnf@itsa.ucsf.edu, for more information.

The "Digoxin-Azole Study" involves six 13-hour hospital visits and pays $1200. Persons interested in this study should call Lingling Guan at 476-5336, 719-0819 pager, or send an email to lguan@itsa.ucsf.edu, for more information.

(HIV CONT. FROM PAGE 1)

macrophage. This CXCR4 binding triggers a suicide response, called apoptosis, in CD8 cells, resulting in their rapid demise.

In the new experiments, the increase in CD8 cell death occurred only when macrophages were present, meaning that HIV needed the macrophages to instigate the CD8 cell suicide. Also, the accelerated CD8 cell death, which occurred when SI strains were present, was much less pronounced in the presence of other strains of the AIDS virus, known as non-syncytium inducing, or NSI, strains. NSI strains are the predominant strains in patients early after HIV infection.

"It is a surprise that different HIV strains would affect CD8 cells differently, since the virus doesn't infect those cells," Herbein says. "This is a totally new idea."

These results, say the researchers, raise the possibility that blocking HIV binding to CXCR4 could stop at least some patients from developing advanced AIDS. About half the people with advanced HIV disease harbor a SI strain of the virus.

"Right now, everyone's focused on finding ways to block CCR5," a molecule that allows infection by the NSI, or early, strains of HIV, says Verdin. "Our research shows that it may be just as important to find ways to stop viruses that bind to CXCR4."

The research also suggests that patients receiving vaccines that use forms of the HIV envelope protein, called gp-120, that are known to bind to CXCR4 should be closely monitored for effects on CD8 T-cells, Herbein says.

On a mechanistic level, the new research also suggests one explanation for a paradoxical characteristic of HIV disease: More CD4 helper cells seem to die than are infected with the virus. The new study suggests that macrophages or other immune cells may help HIV kill those cells.

"We now know at least one way in which HIV can kill a cell without infecting it," Verdin says. "It is likely that this mechanism affects other immune components as well."

Pearl Toy

Bay Area needs blood donors

Labor Day weekend leaves low supply

BY DIANA MARSZALEK

Faced with a serious shortage of type O blood, Bay Area blood banks and hospitals are calling on donors to give blood before the shortage grows critical.

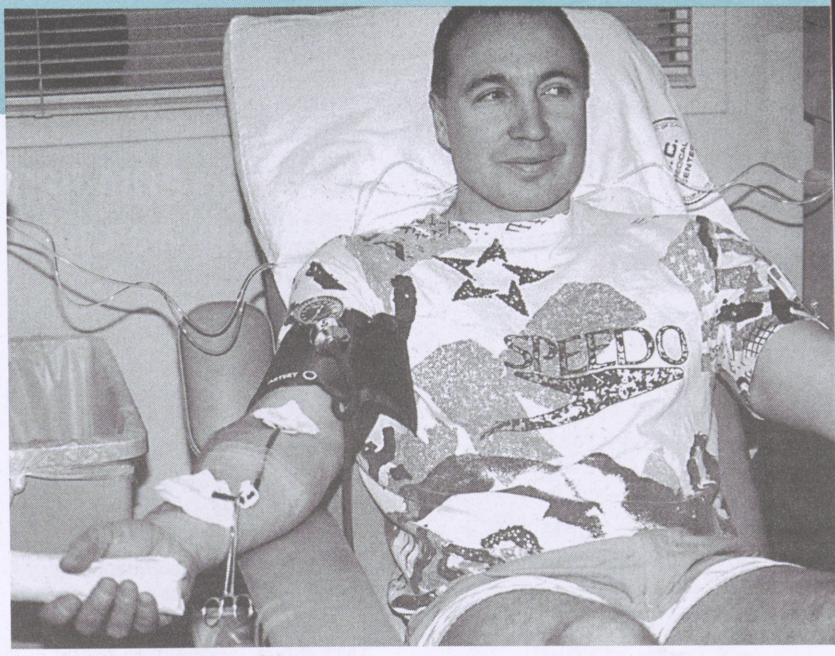
The unusually high demand for the common blood type during and following the Labor Day weekend, combined with the drop in donations over the holiday, has led to a shortage so severe that blood banks and hospitals are scrambling to get the blood they need for emergencies and may have to postpone elective surgeries if it gets worse, officials said. San Francisco-based Blood Centers of the Pacific, which provides most of the blood for 35 Northern California hospitals, was in such short supply last Wednesday that it had only enough type 0 blood to meet a typical half-day's need.

"We're in an increasingly bad situation," said Sandra McIntosh, the Blood Center's communications director.

The dangerously low supply of type O blood — which is the most common blood type, shared by 45 percent of the population — already is close to taking its toll on Bay Area medical centers, including UCSF, says Pearl Toy, chief of the UCSF Stanford Health Care blood bank and donor center at the medical center at UCSF.

The overall blood supply has diminished since blood bank officials have increased stringent screening for conditions such as hepatitis and HIV. "But it is highly unusual for the supply to drop this low," she said.

However, officials said, the situation can be easily remedied if people donate blood.



Donating blood is a simple process that takes about one hour including registration, reviewing donors' medical histories and the actual donation, which takes about eight minutes. Most donors can return to their daily activities after giving blood.

Donors can give blood at UCSF's blood donation center, located in the lobby level of the Moffitt Hospital building at UCSF, 505 Parnassus Ave. in San Francisco. The center is open from 8 a.m. to 7:45 p.m. Monday through Friday and from 9 a.m. to 4:30 p.m. on Saturdays. For more information on giving blood, call 476-6989.

(HOUSING CONT. FROM PAGE 1)

available to faculty and students in the Presidio – considered prime real estate with its sweeping views of the ocean and Golden Gate Bridge – the line for applications formed quickly. Today, it's uncertain just how many members of the UCSF community will take advantage of this offer. Judging by the fact that there are now two lists of people waiting for housing there, the Presidio is considered hot property, Jones says.

> There is a significant housing crisis in terms of affordable housing.

No vacancy at UCSF

The need to scour the neighborhoods for housing well outside UCSF's main campus at Parnassus Heights is a matter of necessity. Simply put, the University has no more room for students at its own rental units at either the Turk Boulevard Apartments, with space for 65 students, or the 17 houses on Third and Fifth avenues, which can house 117 students.

With fewer than 350 units offered to single and married students, UCSF is forced to operate a lottery system to dole out its apartments to a lucky few single students and to provide housing to students with families based on financial need.

This fall, the University actually has 28 fewer units available due to the ongoing construction of apartments at the Aldea San Miguel property. Some students are living in the older apartments while the new ones are being built in phases.

"We're trying to help mitigate the housing shortage," says Jones.

For its part, Campus Housing has verified eligibility for the Presidio dwellings, leaving the assignment of below market rental houses located in the Wherry Housing complex to the private property management firm, John Stewart Co.

"There were so many applications, they're not distributing any more," Jones notes. "There is a significant housing crisis in terms of affordable housing. There's housing out there, but our students can't afford most of it."

The price range of what's considered affordable differs among students. But the standard rule is that rent should not increase 30 percent of a person's gross income.

While San Francisco rents have skyrocketed in recent years, Jones says, "We work very hard to ensure that our rents remain affordable for our students."

Providing affordable housing is a major issue with the planning of UCSF's Mission Bay campus, says Bruce Spaulding, vice chancellor for University Advancement and Planning. Current plans for the entire Mission Bay development include 6,000 housing units of which about 1,700 will be priced for low- to moderate-income residents.

The newly constructed one-bedroom and two-bedroom units in the Aldea San Miguel student apartment complex will rent for $647 and $787 respectively. Students also must pay a security deposit of $300 to insure coverage of damage or additional cleaning.

Two buildings in the Aldea San Miguel Family Student Housing, designed by Gordon H. Chong & Partners, are expected to open next month.

Campus Housing has grandfathered current Aldea residents allowing them to pay the same rental rate they are currently paying ($609 for a one bedroom and $737 for two-bedroom units), plus 3 percent annual inflation for new apartments for up to two years. New Aldea residents will pay the aforementioned higher rates, with increases of 10 percent each year for the first five years of occupancy.

Safety concerns at the Aldea complex have given way to improved lighting at the point of entry, the central courtyards where residents can also garden and relax, and exterior walkways. Eventually, a child care center may be part of the plans as well.

The big hitch is that all the new Aldea units – the first of which are expected to open next month – are already assigned. Even two of the buildings that are targeted to open early next year are already assigned to tenants, Jones says.

"As part of the whole process we gave those students already living with us first shot at the new apartments through a lottery process," Jones says.

The first five buildings were expected to open for occupancy this month, but thanks to the rainy days of El Nino, construction of the Aldea housing project is 170 days behind schedule, Jones says. Now it's expected that two buildings will open in October and three more by February. The overall project of 130 apartments is still targeted for completion in September 1999, adds Jones.

And while the Aldea apartments are much roomier than the older apartments, there will be 35 fewer units because of the campus commitment to stay within the current UCSF square footage requirements.

More housing information can be found at the UCSF Housing Options website at www.housing.ucsf.edu/cho or by calling the Campus Housing Office at 476-2231.

calendar

Sept. 19–Oct. 3, 1998

19 saturday

MACY'S PASSPORT: Passport '98 fashion show moves to Macy's Union Square store, 10 a.m.-8 p.m., to benefit more than 30 HIV/AIDS organizations.

21 monday

ABOG HOSTS BISHOP: The UCSF Academic Business Officers Group will host Chancellor Mike Bishop at its fall kick-off luncheon, from noon–2 p.m., in the Millberry Gym.

22 tuesday

COMMUNITY FORUM: The UCSF AIDS Research Institute presents *Reflections: Science and Gay Men's Lives,* 7-9 p.m., Metropolitan Community Church, 150 Eureka St., San Francisco. To RSVP, call 597-UCSF (8273) or email ari@psg.ucsf.edu.

23 wednesday.

ELDER CARE LECTURE SERIES: Forrest Martin of Baynet, LTC, presents *Elder Care from a 'Home Visiting' Doctor,* noon- 1 p.m.. Sponsored by the UCSF Elder Care Referral Service and Crossroads Home Care and Hospice. Call 502-8673.

BROWN BAG LECTURE: Neil A. Fiore, psychologist and executive coach, presents *Peak Performance on the Job: How to Work Faster and Have More Fun,* 12:10-1 p.m., HSW 300, Parnassus. Sponsored by Public Service Programs. Call 476-4394.

RUSSIAN IMMIGRANTS: Alla Borik, assistant clinical professor, department of psychiatry, presents *Russian Immigrants: Cultural Characteristics and Aspects of Psychiatric Care,* 4-5 p.m., LPPI, Rm. 190, Parnassus. Reception to follow, 5-6 p.m., Rm. 169. Grand Rounds sponsored by the department of psychiatry. Call Bob at 476-7730.

24 thursday

ASBESTOS EXPOSURE: Douglas Fowler, UCSF presents *Assessing Asbestos Exposure,* 8-9 a.m., Mount Zion Cancer Center, Third Floor, Room J322. Grand Rounds sponsored by the UCSF department of medicine and the Center for Occupational & Environmental Health.

NEUROLOGY LECTURE: Richard Traytsman, professor and visiting Cullen professor, John Hopkins, presents *Neuroprotective Strategies: Fact or Fantasy,* 8-9 a.m., S 157, Parnassus. Sponsored by CNS Injury & Research Center, department of neurology. Call Oscar Azim at 502-5189.

DISABLED ARTISTS' SHOW: About 25 disabled artists from the Bay Area exhibit their works, 9 am.-5 p.m., MU Conference Center, Parnassus. A reception will be held at 12:15 to recognize the artists. This event is sponsored by the UCSF Disabilities Interest Group and the Office of Affirmative Action/Equal Opportunity and Diversity.

SURVIVING PATIENT DEATH: Lucy Crain, clinical professor, pediatrics, presents *Surviving Your Patient's Death: Coping Strategies for Pediatricians,* 8-9 a.m., HSW 300, Parnassus. Sponsored by the School of Medicine.

CALL TO CONQUER CANCER: *The Cancer Center sponsors The March,* 11:30 a.m.-1:30 p.m., Union Square, San Francisco, to raise awareness for cancer research. Call 885-3693.

MINORITY ELDERS: Rita R. Hargrave, assistant professor, psychiatry, UC Davis, presents *Assessment Issues in Hispanic and Black Elders,* 11:30 a.m.-12:30 p.m., SFGH, 7M30 A & B. Sponsored by the SFGH department of psychiatry. Call Bob at 476-7730.

NOON LECTURE: Jane E. Koehler, assistant professor of medicine, division of infectious diseases, presents *Bartonella: An Opportunistic Gram-Negative Hemophile,* noon-1 p.m., N 225, Parnassus. Sponsored by the department of medicine.

NEUROLOGY LECTURE: Richard Traytsman, professor and visiting Cullen professor, Johns Hopkins, presents *Nitric Oxide and Cerebrovascular Control in Fetus, Newborn and Adult,* noon-1 p.m., C 215, Parnassus. Sponsored by CNS Injury & Research Center, department of neurology. Call Oscar Azim at 502-5189.

25 friday

VIOLENCE & CHILDREN: Alicia F. Lieberman, director, Child Trauma Research Center, SFGH, professor in residence, UCSF, presents, *The Impact of Domestic Violence on Young Children: Preliminary Results of Relationship Based Interventions,* 10:30 a.m.-noon, Langley Porter Auditorium, Parnassus. Sponsored by Child & Adolescent Psychiatry.

INTEGRATIVE MEDICINE: UCSF hosts a forum to inaugurate the Osher Center for Integrative Medicine, from 1:30-5:30 p.m., Cole Hall, Parnassus. Experts will explain how they intend to search for the most effective treatments by combining non-traditional and traditional approaches in medical care.

WELLNESS LECTURE: Sonja Riket presents *Somatic Movement Education Using Mind/Body Centering,* 12-1 p.m., HSW 300, Parnassus. Sponsored by the Institute of Healing Arts and Sciences. Call 584-4416.

26 saturday

PARTNER ABUSE: The San Francisco Community Area Health Education Center and UCSF's department of family & community medicine, are sponsoring a workshop, *Intimate Partner Abuse in Primary Care*, 8 a.m.-noon, UCSF Faculty Alumni House, 745 Parnassus. This half-day course will teach how to implement protocols for screening and intervention; conduct safety assessments; and describe legal responsibilities for reporting. To register, please call Laurie Kalter at 206-6885.

CHILD'S BRAIN DAY: UCSF Stanford Health Care pediatric neurology, neurological surgery and neuroradiology present *Practical Management of Childhood CNS Disorders,* 8:30 a.m.-5 p.m. This one-day symposium is designed to present the most up-to-date methods of diagnosing and treating disorders of the central nervous system that affect children including epilepsy, brain tumors, cerebral palsy, head injuries, central nervous system infections, and congenital anomalies. Sponsored by the Continuing Medical Education. To enroll, call 476-5808.

ESCAPE TO WATERWORLD: UCSF and UCSF Stanford Health Care employees can escape the heat at a family fun day planned at Waterworld USA, 11 a.m.-5 p.m., Concord. For discounted ticket information, call EMPACT! at 476-2675.

28 monday

TERTIARY CARE PRESENTATION: Charles B. Wilson, professor, neurosurgery, presents *The Future of Health Care in America,* noon-1 p.m., Toland Hall, Parnassus. Sponsored by the Office of Tertiary Care Services.

NOON LECTURE: Michael Scarce presents *Sensational Bodies: The Mass Media's Use and Abuse of Health Science Research on Sexual Orientation,* noon-1 p.m., N 225. Sponsored by the Center for Gender Equity. For more information, call 476-5222.

HEALTH POLICY SEMINAR: Claire Brindis, director, Center for Reproductive Health Policy, presents *Focus Group Methodology,* noon-1:30 p.m., IHPS Seminar Rm., 1388 Sutter St., 11th Flr. Sponsored by the Institute for Health Policy Studies and the Institute for Health & Aging.

DEAN'S RESEARCH SEMINAR: Dan Lowenstein, Nick Barbaro and Ken Laxer present *Epilepsy: Advances in Our Understanding of the Sacred Disease,* 3:30 p.m., N 225. Sponsored by the School of Medicine to showcase stellar scientists.

FOR YOUR EYES ONLY: John Stanley, professor, clinical ophthalmology, presents *Better Vision Now,* 6 p.m., Beckman Vision Center, 8 Kirkham St. Learn new eye surgery options. Call 476-5021.

30 wednesday

BROWN BAG LECTURE: Diana Taylor, associate professor, School of Nursing, presents *Women's Health and Illness Across the Lifespan,* 12:10-1 p.m., HSW 300, Parnassus. Sponsored by Public Service Programs. Call 476-4394.

ON ALCOHOLISM: Ivan Diamond, professor and vice chair, neurology and professor, cellular and molecular biology, presents *Neurobiology of Alcoholism,* 4-5 p.m., Langley Porter Auditorium, Parnassus. Reception to follow, 5-6 p.m., Rm. 169. Grand Rounds sponsored by the department of psychiatry.

OCTOBER

1 thursday

YOM KIPPUR

ASTHMA LECTURE: Gerd Cropp, professor, clinical pediatrics and Robert Pantell, professor, pediatrics, present *Asthma*, 8-9 a.m., HSW 300, Parnassus. Sponsored by the School of Medicine.

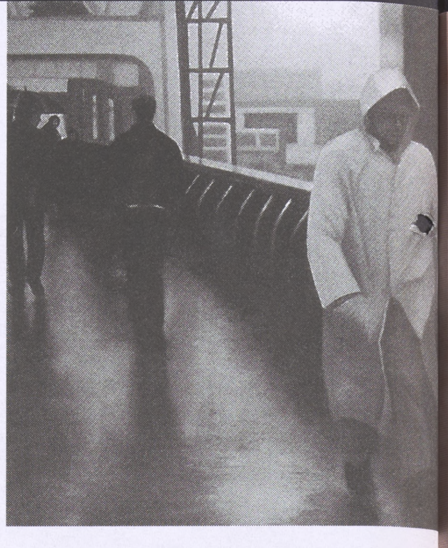
ACT BENEFIT: The UCSF Hospital Auxiliary presents *Fool Moon,* 8 p.m., Geary Theatre.

COLE HALL CINEMA RE-OPENS: For film information, call 476-6932.

2 friday

MARITAL CONFLICT: Joan B. Kelly, executive director, Northern California Mediation Center, Corte Madera, presents *Marital Conflict, Divorce and Children's Adjustment,* 10:30 a.m.-noon, Langley Porter Auditorium, Parnassus. Grand Rounds sponsored by Child & Adolescent Psychiatry.

upcoming events



Celia Rabinovitch shows her paintings titled "Industrial Romance" at the UCSF Faculty/Alumni House, 745 Parnassus Ave., through Nov. 30. A reception for the artist will be held Wednesday, Oct. 7, from 5-7 p.m., at the house. For more information, call 476-4723.

UCSF
University of California San Francisco
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The Race for the Cure team last year invites you to join the run on Sunday, Oct. 18. See upcoming events below.

Evolution of gene action in aging

The Ellison Medical Foundation will be sponsoring an all-day symposium on the "Evolution of Gene Action in Aging and Senescence" at UCSF on Saturday, Oct. 10. Among the invited speakers and discussants are Michael Rose, Cynthia Kenyon, Gary Ruvkin, Josh Lederberg, Eric Kandel and Gerald Weissman. The program will be held at Laurel Heights and will begin at 8 a.m. There is no registration fee but those planning to attend should notify Dianne Leiker by fax at 476-9570 or e-mail at dleiker@dismail.ucsf.edu.

The deadline for registration is Monday, Oct. 5.

On biochips

UCSF is hosting a one-day symposium — BIOMEMS '98 — designed to introduce researchers in the life sciences to the use of MEMS (MicroElectronic Mechanical Systems) techniques to confront biological problems.

Originally developed in the semiconductor industry, examples of this technology are the so-called "DNA chips" for clinical diagnosis or micro-transducers designed for measuring intraocular or atrial pressure.

Jointly sponsored by the department of biopharmaceutical sciences in the UCSF School of Pharmacy and the Stanford Nanofabrication Facility, this symposium will provide interested faculty and students with an introduction to this new and exciting field. Non-engineers are particularly welcome.

For more information, please contact Mary Tang at <mtang@snf.stanford.edu> or visit the website at www-snf.stanford.edu.

Phil Lee talks history of health policy

The Bay Area History of Medicine Club hosts Philip R. Lee, professor emeritus of social medicine, will speak on "Health Policy: A Fifty Year Perspective," on Wednesday, Oct. 14, at 8 p.m. in S 214.

Lee will share his experiences from medical school to his work as the assistant secretary for health in the Clinton Administration as he covers topics including Medicare, the Food & Drug Administration and the National Institutes of Health.

Race for the Cure

Represent UCSF and help raise money for breast cancer research and projects by joining the UCSF Carol Franc Buck Breast Care Center in the upcoming Race for the Cure. The 5K run is slated for Sunday, Oct. 18 at 8:30 a.m. at Golden Gate Park's Sharon Meadow.

Pledged members of the UCSF Breast Care Center team will be eligible for a raffle and will receive a Breast Care Center race T-shirt. Runners, walkers, and volunteers willing to staff the UCSF tent and booth are needed. For more information or to join the UCSF Race for the Cure team, call Kristin at 353-7672.

Genome project director to speak Oct. 19

The Fifth Annual Galante Lecture features Francis S. Collins, head of the Human Genome Project at the National Institutes of Health, who will speak about "Contemplating the Completion of the Human Genome Sequence" at UCSF's Cole Hall at 2 p.m. on Monday, Oct. 19.

Overseeing what many consider the most important undertaking in the biological sciences of our time — to identify and map the sequence of all human DNA — Collins is a leader in the fields of molecular biology and genetics.

This lectureship honors Maurice Galante, UCSF professor emeritus of surgery who trained scores of residents and treated many patients with a special sensitivity to their pain and suffering. His patients have expressed their gratitude through donations to support programs like this one.